

Centre for Infrastructure and Construction Industry Development

The University of Hong Kong, Department of Civil Engineering, Pokfulam Road, Hong Kong.
Tel: 28591972 Fax: 2559 5337, Email: cicid@hku.hk



Conference on *“Innovation Management in Infrastructure Development”*

May 31, 2010

Conference Summary Report

CICID
The University of Hong Kong

TABLE OF CONTENTS	Page
1. CONFERENCE BACKGROUND	3
1.1 BACKGROUND and OBJECTIVES	3
1.2 PARTICIPANTS' PROFILE	3
1.3 CONFERENCE PROGRAMME	3
2. CONFERENCE OUTPUTS	4
2.1 KEYNOTE SPEECHES	4
2.1.0 HOUSING AUTHORITY'S INNOVATION MANAGEMENT	4
2.1.1 DEVELOPING SUSTAINABLE CITIES: THE NEED FOR INNOVATIVE APPROACHES	4
2.1.2 MANAGERIAL INSIGHTS FOR SUSTAINABLE REAL ESTATE INNOVATION	4
2.1.3 INNOVATIVE STRATEGIES FOR FOREIGN FIRMS TO MANAGE CULTURAL RISK IN MAINLAND CHINA	4
2.2 PANEL DISCUSSION	4
2.3 CLOSING REMARKS	6
3. FUTURE DIRECTIONS	6
4. ACKNOWLEDGEMENTS	7
APPENDIX	
Appendix I – Conference Programme	8
Appendix II – Speaker Bio data and Abstracts	9
Appendix III – Questionnaire Survey	11

CONFERENCE PANEL MEMBERS

Mr. Christopher To (Panel Chairman)	Executive Director, Construction Industry Council Hong Kong
Professor Peter Love	Curtin University, Australia
Mr. Robert Schuddeboom	Consul General for the Netherlands in Hong Kong
Mr. Russell Jones	Kumagai Gumi (HK), Deputy Honorary Treasurer, Hong Kong Construction Association

ORGANISING COMMITTEE

Chairman:	Ir. Prof. Mohan Kumaraswamy
Deputy Chairman:	Mr. Jacky Chung
Advisor:	Ir. Sam Chan
Members:	Mr. Joe Zou, Ms. Ruby Kwok, Dr. Gangadhar Mahesh, Mr. Kelwin Wong, Mr. Wu-Jin, Ms. Xie Hong-bo, Mr. Scott Pu, Ms. Lydia Law, Mr. Lin Kit, Mr. Li Lap Pang

1. CONFERENCE BACKGROUND

1.1 Background and Objectives

The Centre for Infrastructure and Construction Industry Development (CICID) of the University of Hong Kong decided to organize such a conference, following a request received from the STAR Master Study Club of RSM Erasmus University, Netherlands to arrange an activity on innovation in a global and urban context to enrich their students' field trip to Hong Kong. This was recognized to be an excellent opportunity to learn from and discuss updated ideas on various innovative technologies and R&D programs in the construction industry (focusing on infrastructure development).

Organized by CICID, this conference was supported by the Hong Kong Housing Authority. It was held at the Hui Pun Hing Lecture Theatre at the University of Hong Kong. The main objectives of the conference were:

- a) Knowledge exchange and dissemination, blending Hong Kong highlights with international insights into initiating, nurturing and benefiting from innovations in infrastructure development;
- b) To benefit from innovative R&D programs with real examples of innovative technologies that have been successfully implemented in Hong Kong construction projects;
- c) To improve the level of innovation awareness in the construction industry;
- d) To highlight the significance of sustainable development and the fundamental role that sustainability plays in innovative urban infrastructure development;
- e) To provide pointers to some key cultural differences when foreign companies work in Mainland China, and show examples of how such differences can be managed better with innovative strategies.

1.2 Participants' Profile

The conference brought together a total of 198 participants from across the industry and academia, 19 of whom were visiting students from RSM Erasmus University, Netherlands. Two of the Dutch students made the presentation on behalf of their group while the other speakers are identified in Section 2.1. The Panel members are identified under the Table of Content.

1.3 Conference Programme

The detailed conference programme was attached in Appendix I for reference.

2. CONFERENCE OUTPUTS

2.1 Speeches / Presentations

A copy of the speakers' bio data and presentation abstracts is in Appendix II.
Topics and Speakers:

2.1.0 Housing Authority's Innovation Management – Key Note Speech

Ms. Ada Fung, Deputy Director, Hong Kong Housing Authority

The PowerPoints is on CICID's website at
http://www.hku.hk/cicid/3_events/95/95_ppt_1.pdf

2.1.1 Developing Sustainable Cities: The Need for Innovative Approaches

Dr. Asanga Gunawansa, Assistant Professor, National University of Singapore

The PowerPoints is on CICID's website at
http://www.hku.hk/cicid/3_events/95/95_ppt_2.pdf

2.1.2 Managerial Insights for Sustainable Real Estate Innovation

STAR Master Study Club, Dutch Study Association RSM Erasmus University
Represented by Berend-Jan van Egmond and Ime Hüsken

The PowerPoints is on CICID's website at
http://www.hku.hk/cicid/3_events/95/95_ppt_3.pdf

2.1.3 Innovative Strategies for Foreign Firms to Manage Cultural Risk in Mainland China

Dr. Florence Yean Yng Ling, Associate Professor, National University of Singapore

The PowerPoints is on CICID's website at
http://www.hku.hk/cicid/3_events/95/95_ppt_4.pdf

2.2 Panel Discussion

Drivers for Innovation and Sustainability

Elaborating on a viewpoint raised during the third speech, in which sustainability was argued to be the main driver for innovation, the Panel suggested that the initiative and willingness from both public and private clients may in fact be more of a deciding factor. Examples of lack of wind power utilization due to high initial cost and hence shortage of commitment from clients in some parts of Australia was discussed. Furthermore, government intervention was deemed important for eradicating urban slums in some countries as highlighted in the second speech.

The Panel discussed the possibility of replacing competitive tendering with contract negotiation, which could be more innovation friendly as it opens up an avenue for contractor or consultant to suggest ideas and technologies suitable for the specific project without worrying about losing the job. This is especially applicable when the project schedule is tight and competitive tendering could take many months while costing a lot to all concerned.

As many buildings in Hong Kong are near the end of their design lives, the question of whether to demolish and rebuild or to retrofit is becoming increasingly pressing. Demolition is usually not desirable as it creates health and environmental issues, especially in a tight space. Consultants and contractors can hence initiate innovations which can prove valuable in the retrofitting of these old estates.

The study tour by the Dutch Master students to Hong Kong was complimented as a good example by the Panel; pointing out that others should be encouraged to travel more to learn and exchange innovative ideas, experiences and cultures.

Obstacles to Innovation and Sustainability

It was generally agreed that the sharing of innovations and technologies is difficult in a competitive construction market unless adequate compensation or advantage is offered. It was also said that one-off payments may not always be considered adequate by specialists who would not easily give up their competitive edge ideas. This is one of the circumstantial problems that the industry will need to resolve in the near future.

Innovations may sometimes be limited to their place of origin, since adaptations elsewhere may be difficult due to many differences such as culture and climate. For example, the vertical green panel may not be suitable for dry climate places where frequent watering may not offer cost effectiveness in its implementation. Furthermore, initiating and implementing innovations requires commitment as well as willingness to accept failure.

Using Australia as an example, it was discussed that efforts to switch to renewable energy have not been sufficient. Oil refineries and mines continue to be built and expanded while wind and solar power are rarely utilized. Nuclear power as a substitute for non-renewable energy is also being looked at by various bodies.

Hong Kong as an Innovative and Sustainable City

Hong Kong, although a pin point on the planet, has a high population density, hence the high rises and an excellent public transit system. Most of Hong Kong's energy consumption is through building operations since the number of motor vehicles is relatively small. If we are more energy efficient in this, Hong Kong can provide a sustainable model for other cities.

A question was raised on whether the neighbouring Guangdong Province of China can adapt the green building guidelines and accreditation set out by the Hong Kong Green Building Council (HKGBC) was raised. For the time being, these mandates

are restricted to Hong Kong. However, the appropriate authority will consider cross border applications of such guidelines and accreditations after five years.

Different views on the three envelope system initiated by the HKHA were expressed in the Panel Discussion. The industry coordinating body (i.e. Construction Industry Council) is currently examining its effectiveness.

The potential for innovation through a Public Private Partnership (PPP) approach was discussed as well. Some Panel member confirmed that PPP was not popular in Hong Kong, although this procurement approach has gained tremendous success and applications in many other countries.

2.3 Closing Remarks

Professor Steve Rowlinson first summed up key points from the four speeches, e.g., from Ms. Ada Fung: the HKHA's 4Cs were introduced: caring, customer-focused, creative and committed; from Dr. Asanga Gunawansa: the true concept of sustainability to facilitate sustainable, viable and equitable development for all; from the Dutch students: the balance between planet, people and profit; and from Dr. Florence Yean Yng Ling: cross cultural factors and the need for open-mindedness to adapt and fit in.

Innovation was said to be re-discovering in a new light what others may have seen, and developing new ideas. The best way to develop break-through ideas is to generate lots of ideas and select the best/optimal. More importantly, a blame-free culture and the willingness to accept failure are two essential components to generating innovations. Having fun and enjoying the creative process are also important.

As pointed out in the Panel Discussion, reward is a critical stimulus in unearthing innovative ideas. Reference was made to a specific innovation register program implemented in Australia, which was a good way of showing people innovation worked. Imagination is the origin of innovations. The speaker concluded the conference with a quote from Einstein, "*imagination is more important than knowledge*".

3. FUTURE DIRECTIONS

All participants were invited to respond to a questionnaire survey on promoting innovation. The purpose of the survey is to evaluate the implementation of innovation related recommendations in the Construction Industry Review Committee Report (CIRC) of 2001, and also to identify the drivers in promoting innovations in the construction industry.

The survey results will be analyzed and sent to those who have chosen to receive a copy of it. The questionnaire form is attached in Appendix III.

4. ACKNOWLEDGEMENTS

All participants are gratefully acknowledged for their valued support. The Dutch student group, the keynote speaker and other two speakers are sincerely thanked for their time and expertise, as are the Panel members. We also regard our gratitude to Kwan On Construction Co Ltd for their sponsorship of this event.



31 May 2010, 2:00 PM-5:30 PM

Hui Pun Hing Lecture Theatre, Library Extension Building
The University of Hong Kong

Invitation for a half-day Conference at The University of Hong Kong on:
'INNOVATION MANAGEMENT in INFRASTRUCTURE DEVELOPMENT'

Monday 31 May 2010: 2:00 pm to 5:30 pm

Hui Pun Hing Lecture Theatre, Library Extension Building, The University of Hong Kong, Pokfulam, Hong Kong

You are cordially invited to the above conference organised by The Centre for Infrastructure & Construction Industry Development (CICID) of The University of Hong Kong; and supported by the Hong Kong Housing Authority. Join us in an afternoon of knowledge exchange & dissemination blending Hong Kong highlights with international insights into initiating, nurturing and benefiting from innovations in infrastructure development.

Speakers from (i) Hong Kong Housing Authority, (ii) RSM Erasmus University Netherlands and (iii) National University of Singapore, will also be joined by other experts in a panel discussion.

CONFERENCE PROGRAMME		
2.00 pm – 2.10 pm	Welcome Address and Introduction	Prof. Mohan Kumaraswamy The University of Hong Kong
2.10 pm – 2.40 pm	Keynote Speech: HOUSING AUTHORITY'S INNOVATION MANAGEMENT	Ms. Ada Fung, JP Deputy Director, HK Housing Authority
2.40 pm – 2.50 pm	Q & A	
2.50 pm – 3.20 pm	DEVELOPING SUSTAINABLE CITIES: THE NEED FOR INNOVATIVE APPROACHES	Dr. Asanga Gunawansa National University of Singapore
3.20 pm – 3.40 pm	Refreshment Break & Networking	
3.40 pm – 4.10 pm	MANAGERIAL INSIGHTS FOR SUSTAINABLE REAL ESTATE INNOVATION	STAR Master Study Club on 'Management of Innovation' RSM Erasmus University, Netherlands
4.10 pm – 4.40 pm	INNOVATIVE STRATEGIES FOR FOREIGN FIRMS TO MANAGE CULTURAL RISK IN MAINLAND CHINA	Dr. Florence Yean Yng Ling National University of Singapore
4.40 pm – 4.45 pm	Souvenir Presentation	
4.45 pm – 5.25 pm	Panel Discussion on Conference Theme with Industry Experts	
5.25 pm – 5.30 pm	Closing Remarks	Prof. Steve Rowlinson The University of Hong Kong

REGISTRATION

- Conference Registration is FREE
- Registrants are entitled to receive ATTENDANCE CERTIFICATES
- Places are limited and registration is on 'FIRST COME' basis.

Please visit http://www.hku.hk/cicid/3_events.htm for registration

Enquiries: Ruby Kwok by email at ppps@hku.hk; or by phone at (852) 2219 4986.

ORGANISER



香港大學
THE UNIVERSITY OF HONG KONG



HKU CIVIL ENGRG. DEPT.

SPONSOR

Kwan On Construction Co Ltd

MANAGING INNOVATIONS: THE HONG KONG HOUSING AUTHORITY'S EXPERIENCE

Ada Y.S. FUNG, JP, Deputy Director of Housing (Development & Construction)

Ms. Ada FUNG, JP is a Deputy Director of Housing. She supervises the Development & Construction Division of the Housing Department, overseeing all facets of work covering project management, planning, design and contract management, as well as establishing operational policies on procurement, design, construction, quality, performance assessment, dispute resolution, research and development, safety and the environment for public housing development in Hong Kong. Being an Architect by profession, she is an active member in the Architectural field as well as in the construction industry in Hong Kong.

Abstract: The mission of the Hong Kong Housing Authority (HKHA) is to provide affordable quality housing, management, maintenance and other housing related services to meet the needs of our customers in a proactive and caring manner. With an existing stock of 700,000 flats and an average production of about 15,000 flats per year, HKHA has been providing public rental housing to around 30% of the Hong Kong's population of 7 million. Given a sizeable portfolio with sustainable development in mind, a caring culture and a tight budget, HKHA has been striving to innovate amidst challenges throughout her history. This paper presents an overview of how HKHA manages innovation in the development and construction arena, how to identify innovative trends and propagate the "R&D DNA", and highlights some of the recent achievements in R&D towards sustainable development, striking a balance amongst social, economic and environmental sustainability and building a harmonious community.

MANAGERIAL INSIGHTS FOR SUSTAINABLE REAL ESTATE INNOVATION

STAR Master Study Club on 'Management of Innovation'
Dutch Study Association RSM Erasmus University, Rotterdam, The Netherlands

Prepared by a group of 20 'Masters' students visiting Hong Kong on their 'International Innovation Project 2010' from the 'Master Management of Innovation' at the Rotterdam School of Management (one of the top 10 Business Schools in Europe)

Abstract: The focus will be on sustainable innovations in the development of real estate property. Particular attention will be given to the role of different actors in the sustainable development of real estate property, and how value is added (including from commercial and social perspectives). In our presentation we will use case examples from sustainable developments in the Dutch city Rotterdam, which is currently very actively focusing on sustainability. Apart from such real estate property projects we will also give examples from other sustainable infrastructure projects, e.g. Rotterdam harbour.

**DEVELOPING SUSTAINABLE CITIES:
THE NEED FOR INNOVATIVE APPROACHES**

Dr. Asanga GUNAWANSA, National University of Singapore

Dr. Asanga GUNAWANSA is an Assistant Professor at the School of Design & Environment, National University of Singapore (NUS). His teaching and research areas include construction law, arbitration and other alternative dispute resolution methods, environmental law and legal and policy aspects of sustainable development. He is a member of the Executive Committee of the Asia Pacific Centre for Environmental Law and a Research Associate of the Institute of Water Policy of the Lee Kwan Yew School of Public Policy. He has over 14 years experience as a legal counsel. Prior to academia, he worked as a legal officer for two agencies of the United Nations. He has also worked as a State Counsel attached to the Department of the Attorney General in Sri Lanka.

Abstract: This presentation will deal with the concept of sustainable development and the need for developing sustainable cities with a specific focus on the innovative approaches that are required. In particular, the need to balance the often competing demands of environmental, social and economic sustainability and the recommended legal and policy approaches for dealing with them will be highlighted. Further, the innovative approaches required to ensure participation by all stakeholders to create win-win platforms for developing cities that could cater to the sustainability requirements of the present as well as future generations will be discussed.

**INNOVATIVE STRATEGIES FOR FOREIGN FIRMS
TO MANAGE CULTURAL RISK IN MAINLAND CHINA**

Dr. Florence Yean Yng LING, National University of Singapore

Dr. Florence Yean Yng LING is an Associate Professor and Vice Dean at School of Design & Environment, National University of Singapore (NUS). She teaches cost estimating and has won numerous teaching excellence awards. Her research interests are in project performance, relational transactions and international construction. Prior to academia, she practised as a quantity surveyor and is a member of the Royal Institution of Chartered Surveyors and a fellow of the Singapore Institute of Surveyors and Valuers.

Abstract: The presentation reports on a study that investigated the innovative strategies that foreign (non Mainland Chinese) architectural, engineering or construction (A/E/C) professionals adopt in managing cross cultural encounters with mainland Chinese in the construction industry. Potential cultural differences when foreigners are executing construction projects in Mainland China are identified, and an innovative framework to manage such cross cultural encounters will be recommended.

To what degree do you consider the following drivers (column 1) are important in promoting a nurturing environment and industry which facilitates innovation?

ITEM	DEGREE OF IMPORTANCE				
	Least Important -----> Most Important				
Market pressure	1	2	3	4	5
Governmental incentives	1	2	3	4	5
An innovation incubation programme	1	2	3	4	5
Subsidies / incentives to promote wider use of innovations	1	2	3	4	5
Knowledgeable and demanding clients	1	2	3	4	5
Innovation stimulating regulations	1	2	3	4	5
Easy access to technology	1	2	3	4	5
Finance for pilot projects	1	2	3	4	5
Programmes promoting collaboration, strategic alliances and long term partnerships	1	2	3	4	5
Integration of design and build	1	2	3	4	5
R & D oriented academia with adequate funding for research and avenues for knowledge dissemination	1	2	3	4	5
Others (please specify):					

To what degree do you consider the following drivers (column 1) are important in building a supportive organization with clear vision and objectives, which facilitates innovation?

ITEM	DEGREE OF IMPORTANCE				
	Least Important -----> Most Important				
Adequate funding	1	2	3	4	5
Support from top management	1	2	3	4	5
Strategic alliances and long term partnerships for sharing of risks	1	2	3	4	5
Empowered staff	1	2	3	4	5
Reasonable time frames	1	2	3	4	5
Favorable return on investments	1	2	3	4	5
Adequately trained staff	1	2	3	4	5
Knowledge friendly culture	1	2	3	4	5
Incentives for successful facilitation of innovation	1	2	3	4	5
Open communication	1	2	3	4	5
Others (Please specify):					

To what degree do you consider the following roles (column 1) of R&D oriented academia with avenues for knowledge dissemination are important in promoting innovations?

ITEM	DEGREE OF IMPORTANCE				
	Least Important -----> Most Important				
Develop industry specific solutions	1	2	3	4	5
Collaborate with specific industry organizations	1	2	3	4	5
Focus on short term industry applications	1	2	3	4	5
Focus on long term industry applications	1	2	3	4	5
Disseminate research knowledge outputs to the whole industry	1	2	3	4	5

Would you be interested in receiving a summary of the survey outcomes? Yes No

If answered yes to previous section, please provide your email:

Please return the completed questionnaire at the reception desk. If returning at a later date, either fax it to 2559 5337 (Attn. Mr. Scott Pu) or email to sypu@hku.hk.

THANK YOU FOR YOUR CO-OPERATION AND VALUABLE TIME